

Y&A-113C

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Ikunori SAKAI, et al.

Serial No. 09/881,677

Filed: June 18, 2001

For: RESIN COMPOSITION BASED ON CRYSTALLINE POLYPROPYLENE

July 24, 2001

The Honorable Commissioner of Patents
and Trademarks
Washington, D.C. 20231

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PRELIMINARY AMENDMENT "B"

Prior to examination on the merits applicants wish to respond to the Notice to File Corrected Application Papers dated July 11, 2001, and to Preliminarily amend the above-identified application as follows:

IN THE ABSTRACT

Please cancel the Abstract in its entirety and substitute therefore the Abstract in Attachment 1.

In the Specification

Please amend the specification as shown in the Attachment 2.

In the Claims

Cancel claims 1 and 2, without prejudice.

Please add the new claims as shown in the Attachment 3.

REMARKS

In response to the Notice to File Corrected Application Papers applicants are herewith submitting a new Abstract, which is in smooth form in Attachment 1. It is requested that the

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Examiner consider the new Abstract and substitute it for the Abstract originally filed in the application.

Claims 1 and 2 have been canceled so as to eliminate the use of square brackets, "[", "]", in non-amended claims; and without prejudice to the presentation of one or more claims directed to the subject matter thereof.

It should be noted that:

- (1) New claim 15 corresponds to original claim 1;
- (2) New claims 16-23 correspond to original claims 3-10 in so far as they were dependent on original claim 1;
- (3) New claim 24 corresponds to original claim 2;
- (4) New claims 25-32 correspond to original claims 3-10 in so far as they were dependent on original claim 2;
- (5) New claim 33 corresponds to original claim 11/1;
- (6) New claims 34-36 correspond to original claims 12-14 in so far as they were dependent on original claim 11/1;
- (7) New claim 37 corresponds to original claim 11/2;
- (8) New claims 38-40 correspond to original claims 12-14 in so far as they were dependent on original claim 11/2.

The new claims 41 and 42 are independent claims and are directed to specific embodiments of the present invention.

As such, no new matter is deemed to have been presented by this amendment.

The new claims 16 to 42 correspond to the claims 16 to 42, as amended, that are now pending in applicants' parent

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application Serial No. 09/202,950, filed December 23, 1998.

In order to complete the record applicants wish to bring to the Examiner's attention the Information Disclosure Statement dated December 21, 1998 in parent application Serial No. 09/202,950. A copy of the Information Disclosure Statement is Enclosure 1.

Copies of the references cited in the Information Disclosure Statement are believed to be available to the Examiner.

An early and favorable action on this application is earnestly solicited.

Respectfully submitted,

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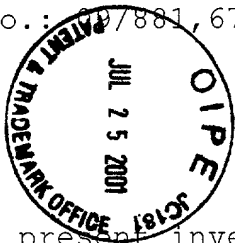
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ATTACHMENT 1

ABSTRACT

The present invention provides a resin composition based on crystalline polypropylene which includes: (a) 3-65% by weight of a component soluble in paraxylene of 23°C, (b) 35-97% by weight of a component soluble in paraxylene of 135 °C and insoluble in paraxylene of 23 °C, and (c) 0-30% by weight of a compoent insoluble in paraxylene of 135 C. The component (a) soluble in paraxylene of 23°C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0-35% by weight and an intrinsic viscosity (**n**) in the range of 0.1-5 dl/g, the component (b) soluble in paraxylene of 135°C and insoluble in paraxylene of 23 °C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic pentad proportion (mmmm) of 97% or higher, a molecular weight distribution (Mw/Mn) of 6 or higher and a molecular weight distribution (Mz/Mw) of 6 or higher and the component (c) insoluble in paraxylene of 135°C is composed substantially of a filler (c1).

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ATTACHMENT 2

Amendments to the Specification

Page 1, before the first paragraph insert:

This application is a continuation of Serial No. 09/202,950, filed December 23, 1998 to which applicants claim priority. Applicants also claim priority to applicants' PCT/JP 98/01890, filed April 24, 1998 and to the Japanese application No. 107866/1997, filed April 24, 1997.

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ATTACHMENT 3

Claims as Amended

Please cancel claims 1 and 2 without prejudice.

Please add the following new claims.

15. A resin composition comprising crystalline polypropylene, which composition contains

(a) 3 - 65% by weight of a component soluble in paraxylene of 23°C,

(b) 35 - 97% by weight of a component soluble in paraxylene of 135°C and insoluble in paraxylene of 23°C and

(c) 0 - 30% by weight of a component insoluble in paraxylene of 135°C,

wherein

the component (a) soluble in paraxylene of 23°C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0 - 35% by weight and an intrinsic viscosity (η) determined in decalin at 135°C in the range of 0.1 - 5 dl/g,

the component (b) soluble in paraxylene of 135°C and insoluble in paraxylene of 23°C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic

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pentad proportion (mmmm) of 97% or higher, a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) of 6 or higher, wherein the crystalline polypropylene (b1) is constituted of at least one selected from the group consisting of, in the first place, a crystalline polypropylene (B-1) which contains a higher molecular weight polypropylene having an intrinsic viscosity (η) determined in decalin at 135°C in the range of 4-13 dl/g in a proportion of 1-35% by weight and has a melt flow rate (MFR) for the entire polypropylene constituent determined at 230°C under a load of 2160 grams in the range of 10 - 80 g/10 min., a propylene content of 95-100 mole % and an ethylene content of 0-5 mole %, in the second place, another crystalline polypropylene (B-2) and, in the third place, a homopolypropylene part (Db) in a crystalline polypropylene block copolymer (D), and

the component (c) insoluble in paraxylene of 135°C is composed substantially of a filler (c1), and wherein

the melt flow rate (MFR) for the entire crystalline polypropylene resin composition determined at 230°C under a load of 2160 g is 11 - 58 g/10 min.

16. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the elastomeric constituent (a1) comprises at least one elastomeric constituent selected from the group consisting of

(A-1) an elastomeric constituent, which may or may not be hydrogenated, based on styrene having a styrene content in the range of 10-70% by weight and a conjugated diene content in the range of 30-90% by weight;

(A-2) an ethylene/ α -olefin random copolymer constituent; and

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

with the proviso that when an elastomer based on styrene or its hydrogenation product having a high styrene content is employed as the styrene-based elastomer (A-1) and the styrene content in the constituent (a1) exceeds the value of 35% by weight by the sole use of such styrene-based elastomer, other constituent styrene-based elastomer(s) having lower styrene content, or further ingredient(s) of ethylene/ α -olefin random copolymer (A-2) or ethylene/ α -olefin/non-conjugated polyene random copolymer (A-3) may be employed in combination with the styrene-based elastomer (A-1) so as to attain a content of styrene structural unit in the constituent (a1) as an average value within the range of 0-35% by weight.

17. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the elastomeric constituent (a1) comprises at least one elastomer selected from the group consisting of

(A-1) an elastomeric constituent, which may or may not be hydrogenated, based on styrene having 10-40% by weight of a constituent polymer block based on styrene and 60-90% by weight of a constituent polymer block based on a conjugated diene;

(A-2) an ethylene/ α -olefin random copolymer constituent; and

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

with the proviso that when an elastomer based on styrene or its hydrogenation product having a high styrene content is employed as the styrene-based elastomer (A-1) and the styrene content in the constituent (a1) exceeds the value of 35% by weight by the sole use of such styrene-based elastomer, other constituent styrene-based elastomer(s) having lower styrene content, or further ingredient(s) of ethylene/ α -olefin random copolymer (A-2) or ethylene/ α -olefin/non-conjugated polyene random copolymer (A-3) may be employed in combination with the styrene-based elastomer (A-1) so as to attain a content of styrene structural unit in the constituent (a1) as an average value within the range of 0-35% by weight.

18. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the elastomeric constituent (a1) comprises at least one elastomeric constituent selected from the group consisting of

(A-1) an elastomeric constituent, which may or may not be hydrogenated, based on styrene having 10-70% by weight of a constituent polymer block based on styrene and 30-90% by weight of a constituent polymer block based on a conjugated diene;

(A-2) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer; and

(Da) propylene/ethylene copolymer part in a crystalline block-copolymer component based on propylene (D);

with the proviso that when an elastomer based on styrene or its hydrogenation product having a high styrene content is employed as the styrene-based elastomer (A-1) and the styrene content in the constituent (a1) exceeds the value of 35% by weight by the sole use of such styrene-based elastomer, other constituent styrene-based elastomer(s) having lower styrene content, or further ingredient(s) of ethylene/ α -olefin random copolymer (A-2), ethylene/ α -olefin/non-conjugated polyene random copolymer (A-3) or crystalline propylene block-copolymer (D) may be employed in combination with the styrene-based elastomer (A-1) so as to attain

a content of styrene structural unit in the constituent (a1) as an average value within the range of 0-35% by weight.

19. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the crystalline polypropylene constituent (b1) comprises at least one crystalline polypropylene constituent selected from the group consisting of

(B-1) a crystalline polypropylene constituent which comprises a high molecular weight polypropylene product having an intrinsic viscosity (η), determined in decalin at 135 °C, of 4-13 dl/g in an amount in the range of 1-35% by weight and which has a melt flow rate (MFR) of the entire polypropylene constituent, determined at 230 °C under a load of 2160 g, in the range of 1-100 g/10 min., a propylene content in the range of 95-100 mole % and an ethylene content in the range of 0-5 mole %;

(B-2) crystalline polypropylene constituents other than that of the above (B-1); and

(Db) propylene homopolymer part in the propylene-based crystalline block-copolymer component (D).

20. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the crystalline polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which comprises a constituent

component having a weight-average molecular weight (Mw) for the 121 °C elution fraction, determined by cross fractionation chromatograph (CFC), of 3.5×10^5 or higher.

21. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the crystalline polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which comprises a constituent component having a weight-average molecular weight (Mw) for the 121 °C elution fraction, determined by cross fractionation chromatograph (CFC), of 3.5×10^5 or higher and an ethylene content for the highest molecular weight fraction (mM), determined by gel permeation chromatography (GPC), of 45% by weight or lower.

22. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the crystalline polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which has a melt flow rate (MFR), determined at 230 °C under a load of 2160 g, in the range of 5-400 g/10 min.

23. The resin composition based on crystalline polypropylene as claimed in claim 15, wherein the crystalline

polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which has a melt flow rate (MFR), determined at 230 °C under a load of 2160 g, in the range of 30-150 g/10 min.

24. A resin composition comprising crystalline polypropylene, which composition contains

(a) 20 - 35% by weight of a component soluble in paraxylene of 23°C,

(b) 43 - 65% by weight of a component soluble in paraxylene of 135°C and insoluble in paraxylene of 23°C and

(c) 15 - 22% by weight of a component insoluble in paraxylene of 135°C,

wherein

the component (a) soluble in paraxylene of 23°C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0 - 35 % by weight and an intrinsic viscosity (η) determined in decalin at 135 °C in the range of 0.1 - 5 dl/g,

the component (b) soluble in paraxylene of 135°C and insoluble in paraxylene of 23°C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic pentad proportion (mmmm) of 98% or higher, a molecular weight distribution expressed by weight-average molecular weight/number-

average molecular weight (M_w/M_n), determined by gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z -average molecular weight/weight-average molecular weight (M_z/M_w) of 8 or higher, wherein the crystalline polypropylene (b1) is constituted of at least one selected from the group consisting of, in the first place, a crystalline polypropylene (B-1) which contains a higher molecular weight polypropylene having an intrinsic viscosity (η) determined in decalin at 135°C in the range of 4 - 13 dl/g in a proportion of 1 - 35 % by weight and has a melt flow rate (MFR) for the entire polypropylene constituent determined at 230°C under a load of 2160 grams in the range of 10 - 80 g/10 min., a propylene content of 95 - 100 mole % and an ethylene content of 0 - 5 mole %, in the second place, another crystalline polypropylene (B-2) and, in the third place, a homopolypropylene part (Db) in a crystalline polypropylene block-copolymer (D), and

the component (c) insoluble in paraxylene of 135°C is composed substantially of powdery talc having an average particle size in the range of 1-5 μm , and wherein

the melt flow rate (MFR) for the entire crystalline polypropylene resin composition determined at 230°C under a load of 2160 g is 11 - 58 g/10 min.

25. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the elastomeric constituent (a1) comprises at least one elastomeric constituent selected from the group consisting of

(A-1) an elastomeric constituent, which may or may not be hydrogenated, based on styrene having a styrene content in the range of 10-70% by weight and a conjugated diene content in the range of 30-90% by weight;

(A-2) an ethylene/ α -olefin random copolymer constituent; and

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

with the proviso that when an elastomer based on styrene or its hydrogenation product having a high styrene content is employed as the styrene-based elastomer (A-1) and the styrene content in the constituent (a1) exceeds the value of 35% by weight by the sole use of such styrene-based elastomer, other constituent styrene-based elastomer(s) having lower styrene content, or further ingredient(s) of ethylene/ α -olefin random copolymer (A-2) or ethylene/ α -olefin/non-conjugated polyene random copolymer (A-3) may be employed in combination with the styrene-based elastomer (A-1) so as to attain a content of styrene structural unit in the constituent (a1) as an average value within the range of 0-35% by weight.

26. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the elastomeric constituent (a1) comprises at least one elastomeric constituent selected from the group consisting of

(A-1) an elastomeric constituent, which may or may not be hydrogenated, based on styrene having 10-40% by weight of a constituent polymer block based on styrene and 60-90% by weight of a constituent polymer block based on a conjugated diene;

(A-2) an ethylene/ α -olefin random copolymer constituent; and

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

with the proviso that when an elastomer based on styrene or its hydrogenation product having a high styrene content is employed as the styrene-based elastomer (A-1) and the styrene content in the constituent (a1) exceeds the value of 35% by weight by the sole use of such styrene-based elastomer, other constituent styrene-based elastomer(s) having lower styrene content, or further ingredient(s) of ethylene/ α -olefin random copolymer (A-2) or ethylene/ α -olefin/non-conjugated polyene random copolymer (A-3) may be employed in combination with the styrene-based elastomer (A-1) so as to attain a content of styrene structural unit in the constituent (a1) as an average value within the range of 0-35% by weight.

27. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the elastomeric constituent (a1) comprises at least one elastomeric constituent selected from the group consisting of

(A-1) an elastomeric constituent, which may or may not be hydrogenated, based on styrene having 10-70% by weight of a constituent polymer block based on styrene and 30-90% by weight of a constituent polymer block based on a conjugated diene;

(A-2) an ethylene/ α -olefin random copolymer constituent;

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent; and

(Da) propylene/ethylene copolymer part in a crystalline block-copolymer component based on propylene (D);

with the proviso that when an elastomer based on styrene or its hydrogenation product having a high styrene content is employed as the styrene-based elastomer (A-1) and the styrene content in the constituent (a1) exceeds the value of 35% by weight by the sole use of such styrene-based elastomer, other constituent styrene-based elastomer(s) having lower styrene content, or further ingredient(s) of ethylene/ α -olefin random copolymer (A-2), ethylene/ α -olefin/non-conjugated polyene random copolymer (A-3) or crystalline propylene block-copolymer (D) may be employed in combination with the styrene-based elastomer (A-1)

so as to attain a content of styrene structural unit in the constituent (a1) as an average value within the range of 0-35% by weight.

28. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the crystalline polypropylene constituent (b1) comprises at least one crystalline polypropylene constituent selected from the group consisting of

(B-1) a crystalline polypropylene constituent which comprises a high molecular weight polypropylene product having an intrinsic viscosity (η), determined in decalin at 135 °C, of 4-13 dl/g in an amount in the range of 1-35% by weight and which has a melt flow rate (MFR) of the entire polypropylene constituent, determined at 230 °C under a load of 2160 g, in the range of 1-100 g/10 min., a propylene content in the range of 95-100 mole % and an ethylene content in the range of 0-5 mole %;

(B-2) crystalline polypropylene constituents other than that of the above (B-1); and

(Db) propylene homopolymer part in the propylene-based crystalline block-copolymer component (D).

29. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the crystalline polypropylene constituent (b1) is composed substantially of a

crystalline polypropylene product which comprises a constituent component having a weight-average molecular weight (Mw) for the 121 °C elution fraction, determined by cross fractionation chromatograph (CFC), of 3.5×10^5 or higher.

30. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the crystalline polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which comprises a constituent component having a weight-average molecular weight (Mw) for the 121 °C elution fraction, determined by cross fractionation chromatograph (CFC), of 3.5×10^5 or higher and an ethylene content for the highest molecular weight fraction (mM), determined by gel permeation chromatography (GPC), of 45% by weight or lower.

31. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the crystalline polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which has a melt flow rate (MFR), determined at 230 °C under a load of 2160 g, in the range of 5-400 g/10 min.

32. The resin composition based on crystalline polypropylene as claimed in claim 24, wherein the crystalline polypropylene constituent (b1) is composed substantially of a crystalline polypropylene product which has a melt flow rate (MFR), determined at 230 °C under a load of 2160 g, in the range of 30-150 g/10 min.

33. A resin composition comprising crystalline polypropylene, which composition contains

(A) at least one elastomeric component selected from the group consisting of

(A-1) styrene-based elastomeric constituent, which may or may not be hydrogenated, having a styrene content in the range of 10-70% by weight and a conjugated diene content in the range of 30-90% by weight;

(A-2) an ethylene/ α -olefin random copolymer constituent; and

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

(B) at least one crystalline polypropylene constituent selected from the group consisting of

(B-1) a crystalline polypropylene constituent which comprises a high molecular weight polypropylene product having an intrinsic viscosity (η), determined in decalin at 135 °C, of 4-13

dl/g in an amount in the range of 1-35% by weight and which has a melt flow rate (MFR) of the entire polypropylene constituent, determined at 230 °C under a load of 2160 g, in the range of 10-80 g/10 min., a propylene content in the range of 95-100 mole % and an ethylene content in the range of 0-5 mole % and

(B-2) a crystalline polypropylene constituent other than the above (B-1);

(C) a filler component; and

(D) a crystalline block-copolymer component based on propylene comprising

(Da) a propylene/ethylene copolymer part and

(Db) a propylene homopolymer part

and containing, with respect to the total weight of the copolymer component, 5-50% by weight of a 23 °C paraxylene-soluble component (a) which has an intrinsic viscosity (η), determined in decalin at 135 °C, of 2-10 dl/g and an ethylene content of 15-60 mole %,

wherein the propylene/ethylene copolymer part (Da) is substantially the 23 °C paraxylene-soluble component (e) and

the propylene homopolymer part (Db) is substantially a component (b) soluble in 135 °C paraxylene and insoluble in 23 °C under a load of 2160 g, of 10-500 g/10 min., and

wherein the weight ratio of (A)/(B)/(C)/(D) is in the

range of (3-99)/(1-97)/(0-30)/(0-96);

said resin composition having

(a) 3-65% by weight of a component soluble in paraxylene of 23 °C,

(b) 35-97% by weight of a component soluble in paraxylene of 135 °C and insoluble in paraxylene of 23 °C and

(c) 0-30% by weight of a component insoluble in paraxylene of 135 °C,

wherein

the component (a) soluble in paraxylene of 23 °C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0-35% by weight and its intrinsic viscosity (η) determined in decalin at 135 °C in the range of 0.1-5 dl/g,

the component (b) soluble in paraxylene of 135 °C and insoluble in paraxylene of 23 °C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic pentad proportion (mmmm) of 97% or higher, a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) or 6 or higher and

the component (c) insoluble in paraxylene of 135 °C is

composed substantially of a filler (c1), and
wherein

the melt flow rate (MFR) for the entire crystalline polypropylene resin composition determined at 230°C under a load of 2160 g is 11 - 58 g/10 min.

34. The resin composition based on crystalline polypropylene as claimed in claim 33, wherein the weight ratio of (A)/(B)/(C)/(D) is in the range of (3-40)/(1-50)/(0-30)/(10-96).

35. The resin composition based on crystalline polypropylene as claimed in claim 33, wherein the crystalline polypropylene component (B) has an isotactic pentad proportion (mmmm) of 97% or higher.

36. The resin composition comprising crystalline polypropylene as claimed in claim 33, wherein the crystalline polypropylene component (B) has a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by a gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) of 6 or higher.

37. A resin composition based on crystalline polypropylene which composition contains

(A) at least one elastomeric component selected from the group consisting of

(A-1) styrene-based elastomeric constituent, which may or may not be hydrogenated, having a styrene content in the range of 10-70% by weight and a conjugated diene content in the range of 30-90% by weight;

(A-2) an ethylene/ α -olefin random copolymer constituent; and

(A-3) an ethylene/ α -olefin/non-conjugated polyene random copolymer constituent;

(B) at least one crystalline polypropylene constituent selected from the group consisting of

(B-1) a crystalline polypropylene constituent which comprises a high molecular weight polypropylene product having an intrinsic viscosity (η), determined in decalin at 135 °C, of 4-13 dl/g in an amount in the range of 1-35% by weight and which has a melt flow rate (MFR) of the entire polypropylene constituent, determined at 230 °C under a load of 2160 g, in the range of 10-80 g/10 min., a propylene content in the range of 95-100 mole % and an ethylene content in the range of 0-5 mole % and

(B-2) a crystalline polypropylene constituent other

than the above (B-1);

(C) a filler component composed substantially of a powdery talc having an average particle size in the range of 1-5 μm ;

(D) a crystalline block-copolymer component based on propylene comprising

(Da) a propylene/ethylene copolymer part and

(Db) a propylene homopolymer part

and containing, with respect to the total weight of the copolymer component, 5-50% by weight of the 23 °C paraxylene-soluble component (a) which has an intrinsic viscosity (η), determined in decalin at 135 °C, of 2-10 dl/g and an ethylene content of 15-60 mole %,

wherein the propylene/ethylene copolymer part (Da) is substantially the 23 °C paraxylene-soluble component (e) and

the propylene homopolymer part (Db) is substantially a component (b) soluble in 135 °C paraxylene and insoluble in 23 °C paraxylene and having a melt flow rate (MFR), determined at 230°C under a load of 2160 g, of 10-500 g/10 min., and

wherein the weight ratio of (A)/(B)/(C)/(D) is in the range of (3-99)/(1-97)/(0-30)/(0-96);

said resin composition having

(a) 20-35% by weight of a component soluble in paraxylene of 23 °C,

(b) 43-65% by weight of a component soluble in

paraxylene of 135 °C and insoluble in paraxylene of 23 °C and

(c) 15-22% by weight of a component insoluble in paraxylene of 135 °C,

wherein

the component (a) soluble in paraxylene of 23 °C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0-35% by weight and an intrinsic viscosity (η) determined in decalin at 135 °C in the range of 0.1-5 dl/g,

the component (b) soluble in paraxylene at 135 °C and insoluble in paraxylene of 23 °C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic pentad proportion (mmmm) of 98% or higher, a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) of 8 or higher and

the component (c) insoluble in paraxylene of 135 °C is composed substantially of a filler (c1), and wherein

the melt flow rate (MFR) for the entire crystalline polypropylene resin composition determined at 230°C under a load of 2160 g is 11 - 58 g/10 min.

38. The resin composition based on crystalline polypropylene as claimed in claim 37, wherein the weight ratio of (A)/(B)/(C)/(D) is in the range of (3-40)/(1-50)/(0-30)/(10-96).

39. The resin composition based on crystalline polypropylene as claimed in claim 37, wherein the crystalline polypropylene component (B) has an isotactic pentad proportion (mmmm) of 97% or higher.

40. The resin comprising crystalline polypropylene as claimed in claim 37, wherein the crystalline polypropylene component (B) has a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by a gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) of 6 or higher.

41. A resin composition comprising crystalline polypropylene, which composition contains

(a) 3 - 65% by weight of a component soluble in paraxylene of 23 °C,

(b) 35 - 97% by weight of a component soluble in paraxylene of 135 °C and insoluble in paraxylene of 23 °C and

(c) 0 - 30% by weight of a component insoluble in

paraxylene of 135 °C,

wherein

the component (a) soluble in paraxylene of 23 °C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0 - 35 % by weight and an intrinsic viscosity (η) determined in decalin at 135 °C in the range of 0.1 - 5 dl/g,

the component (b) soluble in paraxylene of 135 °C and insoluble in paraxylene of 23 °C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic pentad proportion (mmmm) of 97 % or higher, a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) of 6 or higher, wherein the crystalline polypropylene (b1) comprises a crystalline polypropylene (B-1) which contains a higher molecular weight polypropylene having an intrinsic viscosity (η) determined in decalin at 135 °C in the range of 4 - 13 dl/g in a proportion of 1 - 35 % by weight and has a melt flow rate (MFR) for the entire polypropylene constituent determined at 230 °C under a load of 2160 grams in the range of 10 - 80 g/10 min., a propylene content of 95 - 100 mole % and an ethylene content of 0 - 5 mole % or

comprises this crystalline polypropylene (B-1) and a homopolypropylene part (Db) in a crystalline polypropylene block-copolymer (D), and

the component (c) insoluble in paraxylene of 135°C is composed substantially of a filler (c-1), and wherein

the melt flow rate (MFR) for the entire crystalline polypropylene resin composition determined at 230°C under a load of 2160 g is 11 - 58 g/10 min.

42. A resin composition comprising crystalline polypropylene, which composition contains

(a) 20 - 35% by weight of a component soluble in paraxylene of 23°C,

(b) 43 - 65% by weight of a component soluble in paraxylene of 135°C and insoluble in paraxylene of 23°C,

(c) 15 - 22% by weight of a component insoluble in paraxylene of 135°C,

wherein

the component (a) soluble in paraxylene of 23 °C is composed substantially of an elastomeric constituent (a1) having a content of styrene or its derivative in the range of 0 - 35 % by weight and an intrinsic viscosity (η) determined in decalin at 135 °C in the range of 0.1 - 5 dl/g,

the component (b) soluble in paraxylene of 135 °C and insoluble in paraxylene of 23 °C is composed substantially of a crystalline polypropylene constituent (b1) having an isotactic pentad proportion (mmmm) of 98 % or higher, a molecular weight distribution expressed by weight-average molecular weight/number-average molecular weight (M_w/M_n), determined by gel permeation chromatography (GPC), of 9 or higher and a molecular weight distribution expressed by z-average molecular weight/weight-average molecular weight (M_z/M_w) of 8 or higher, wherein the crystalline polypropylene (b1) comprises a crystalline polypropylene (B-1) which contains a higher molecular weight polypropylene having an intrinsic viscosity (η) determined in decalin at 135°C in the range of 4 - 13 dl/g in a proportion of 1 - 35 % by weight and has a melt flow rate (MFR) for the entire polypropylene constituent determined at 230 °C under a load of 2160 grams in the range of 10 - 80 g/10 min., a propylene content of 95 - 100 mole % and an ethylene content of 0 - 5 mole % or comprises this crystalline polypropylene (B-1) and a homopolypropylene part (Db) in a crystalline polypropylene block-copolymer (D), and

the component (c) insoluble in paraxylene of 135°C is composed substantially of powdery talc having an average particle size in the range of 1 - 5 μm , and wherein

ATTACHMENT 3

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the melt flow rate (MFR) for the entire crystalline polypropylene resin composition determined at 230°C under a load of 2160 g is 11 - 58 g/10 min.

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